IN THE CLAIMS

1. (original)   A hydraulic circuit for an option tool of heavy equipment, comprising:

a variable displacement hydraulic pump and a pilot pump which are connected with an engine;

a work apparatus and an option tool which are connected with the hydraulic pump and are driven;

a main control valve which is installed in a flow path between the hydraulic pump and the work apparatus, and the hydraulic pump and the option tool;

a first electromagnetic proportion valve which outputs a second pressure corresponding to an electrical signal applied from a controller and variably controls the discharge amount of the hydraulic pump;

a remote control valve which controls pilot pressure capable of switching a spool of the main control valve;

a poppet valve which is openably and closably installed in a flow path of a supply side of the option tool spool;

a first spool which is installed in a flow path between the poppet valve and the option tool spool and has an opening portion adapted to maintain a constant pressure difference when the first spool is switched by pilot pressure discharged from the pilot pump; and

a second spool which is installed in a down stream side of the poppet valve and is switched when an over load occurs due to an over pressure exceeding the degree set in the option tool for thereby closing the poppet valve.

2. (original)   The circuit of claim 1, further comprising:

a second electromagnetic proportion valve which is installed in a flow path between the pilot pump and the first spool and outputs a secondary pressure

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corresponding to an electrical signal applied from the controller and switches the first spool.

3. (currently amended)   The circuit of ~~either~~ claim 1, ~~or claim 2~~, wherein at least one of the first, second spools and poppet valve is installed in the interior of the main control valve.

4. (currently amended)   The circuit of ~~either~~ claim 1 ~~or claim 2~~, wherein the first, second spools and poppet valve are installed in the interior of the main control valve.

5. (currently amended)   The circuit of ~~either~~ claim 1 ~~or claim 2~~, wherein at least one of the first, second spools and poppet valve is installed outside the main control valve.

6. (currently amended)   The circuit of ~~either~~ claim 1 ~~or claim 2~~, wherein the first, second spools and poppet valve are installed outside the main control valve.

7. (currently amended)   The circuit of ~~either~~ claim 1 ~~or claim 2~~, further comprising:

a third spool which is openably and closably installed in a flow path of a supply side of the option tool spool, and is switched when the second spool is switched due to an over load generated in the option tool, and is adapted to prevent hydraulic fluid from being over supplied by the amount exceeding the amount set in the option tool.

8. (original)   The circuit of claim 1, further comprising:

an orifice installed in a flow path between the second spool and the poppet valve.

9. (original)   The circuit of claim 7, further comprising:

an orifice installed in a flow path between the second spool and the third spool.

Add the following claims:

10. (new)   The circuit of claim 2, wherein at least one of the first, second spools and poppet valve is installed in the interior of the main control valve.

11. (new)   The circuit of claim 2, wherein the first, second spools and poppet valve are installed in the interior of the main control valve.

12. (new)   The circuit of claim 2, wherein at least one of the first, second spools and poppet valve is installed outside the main control valve.

13. (new)   The circuit of claim 2, wherein the first, second spools and poppet valve are installed outside the main control valve.

14. (new)   The circuit of claim 2, further comprising:

a third spool which is openably and closably installed in a flow path of a supply side of the option tool spool, and is switched when the second spool is switched due to an over load generated in the option tool, and is adapted to prevent hydraulic fluid from being over supplied by the amount exceeding the amount set in the option tool.